NOTICE OF TITLE V AIR QUALITY PERMIT
APPLICATION AND DRAFT PERMIT

The South Dakota Department of Environment and Natural Resources (DENR) has received and reviewed the application for renewal of a Title V air quality permit for the following applicant:

APPLICANT NAME: Northern Lights Ethanol, LLC (POET Biorefining – Big Stone)

FACILITY LOCATION: Big Stone City, South Dakota

The Title V air quality operating permit will also be revised to modify several process/operational limits and short-term air emission limits. The following processes and units are included in the permit renewal:

Unit #1 – Grain receiving. The grain is received in a receiving pit and elevator legs transport the grain to a grain storage bin. The system has a maximum operating rate of 840 tons per hour. Air emissions are controlled by a baghouse.

Unit #2 – Grain cleaning, grain transfer, and surge bin loading. The grain is transferred from the grain storage bins to a grain cleaner. The cleaned corn is transferred to a surge bin. The system has a maximum operating rate of 140 tons per hour. Air emissions are controlled by a baghouse.

Unit #4 – Fermentation and distillation process. The fermentation process consists of four fermentation tanks and the distillation system consists of a beer stripper, rectifier, side stripper, two molecular sieves, and evaporators. The system has a maximum operating rate of 165 tons per hour and 34,065 gallons per hour, respectively. Air emissions are controlled by a wet scrubber and a thermal oxidizer.

Unit #6 – Three dried distiller grain dryers. The dryers are fired with natural gas. The system has a maximum operating rate of 30 tons per hour. Air emissions are controlled by a thermal oxidizer.

Unit #7 – Dried distiller grain cooling and transportation system. The system has a maximum operating rate of 30 tons per hour. Air emissions are controlled by a baghouse.

Unit #8 – Dried distiller grain silo loading process. The system has a maximum operating rate of 27 tons per hour. Air emissions are controlled by a baghouse.

Unit #9 – An industrial cooling tower

Unit #10 – A boiler fired with natural gas and diesel fuel. The boiler has a maximum operating rate of 81 million Btus per hour heat input.

Unit #11 – A boiler fired with natural gas and diesel fuel. The boiler has a maximum operating rate of 81 million Btus per hour heat input.

Unit #15 – An above ground 180,000 gallon storage tank with an internal floating roof.

Unit #16 – An above ground 60,000 gallon storage tank with an internal floating roof.

Unit #17 – An above ground 1,000,000 gallon storage tank with an internal floating roof.

Unit #18 – An above ground 1,000,000 gallon storage tank with an internal floating roof.

Unit #19 – An above ground 65,000 gallon storage tank with an internal floating roof.

Unit #20 – A submerged truck loading rack. The system has a maximum operating rate of 39,000 gallons per hour. Air emissions are controlled by a flare.

Unit #21 – A railcar loading rack. The system has a maximum operating rate of 150,000 gallons per hour. Air emissions are controlled by a flare.

Unit #22 – Grain milling. The grain is transferred from the surge bin to a hammer mill. The hammer mill grinds the grain into flour. The system has a maximum operating rate of 22 tons per hour. Air emissions are controlled by a baghouse.

Unit #23 – Grain milling. The grain is transferred from the surge bin to a hammer mill. The hammer mill grinds the grain into flour. The system has a maximum operating rate of 22 tons per hour. Air emissions are controlled by a baghouse.

Unit #24 – Grain milling. The grain is transferred from the surge bin to a hammer mill. The hammer mill grinds the grain into flour. The system has a maximum operating rate of 22 tons per hour. Air emissions are controlled by a baghouse.

Unit #25 – Grain milling. The grain is transferred from the surge bin to a hammer mill. The hammer mill grinds the grain into flour. The system has a maximum operating rate of 22 tons per hour. Air emissions are controlled by a baghouse.

Unit #26 – Fermentation and distillation process. The fermentation process consists of four fermentation tanks and the distillation system consists of a beer stripper, rectifier, side stripper, two molecular sieves, and evaporators. The system has a maximum operating rate of 165 tons per hour and 74,490 gallons per hour, respectively. Air emissions are controlled by a wet scrubber and a thermal oxidizer.

Unit #27 – Grain milling. The grain is transferred from the surge bin to a hammer mill. The hammer mill grinds the grain into flour. The system has a maximum operating rate of 22 tons per hour. Air emissions are controlled by a baghouse.

Unit #28 – Grain milling. The grain is transferred from the surge bin to a hammer mill. The hammer mill grinds the grain into flour. The system has a maximum operating rate of 22 tons per hour. Air emissions are controlled by a baghouse.

Unit #29 – A fluid bed cooler. The fluid bed cools the dried distiller grain. The system has a maximum operating rate of 30 tons per hour. Air emissions are controlled by a baghouse.

Unit #30– A dried distillers grain silo. The system has a maximum operating rate of 27 tons per hour. Air emissions are controlled by a baghouse.

Unit #31– An industrial cooling tower.

A review of this facility indicates it can operate in compliance with South Dakota's Air Pollution Control rules and the federal Clean Air Act. DENR, therefore, recommends that the Board of Minerals and Environment issue this operating permit with conditions to ensure compliance with SDCL 34A-1 and the federal Clean Air Act.

In accordance with the Administrative Rules of South Dakota (ARSD) 74:36:05:17, any person desiring to comment on DENR's draft permit must submit written comments to the address below within thirty days of this public notice. Comments may be directed to the following mailing address: PMB 2020, Lita Magedanz, Department of Environment and Natural Resources; Division of Environmental Services; 523 East Capitol, Pierre, South Dakota 57501. DENR will consider and address all comments submitted, and issue a final permit decision pursuant to ARSD 74:36:05:18. DENR will notify the applicant and each person that submitted written comments or requested notice of DENR's final permit decision, including notification of any changes to the permit based on the comments.

Any person desiring to contest the issuance of this permit and have a contested case hearing must file a petition, which complies with ARSD 74:09:01:01. This petition must be filed either within thirty days of this public notice or, if that person submits comments on DENR's draft permit pursuant to the paragraph above, within thirty days of receiving notice of DENR's final permit decision. Upon receipt of a petition, DENR will schedule this matter for a contested case hearing before the Board of Minerals and Environment.

If no comments or objections are received within thirty days of this public notice, the draft permit becomes the final permit decision and the proposed permit will be submitted to EPA for review.

Copies of DENR's draft permit and other information may be obtained from Marc Macy, Engineer III, at the above address or telephone (605) 773-3151.

Steven M Pirner, Secretary
Department of Environment and Natural Resources

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